

AN OVERVIEW OF THE IMPORTANCE OF WASTE MANAGEMENT INDUSTRIAL AND NECESSITY CREATION OF INDUSTRIAL ECOLOGY AS THE ENVIRONMENTAL POLLUTANTS REDUCING IN THE WORLD AND IRAN

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Abstract

Hazardous waste produced in industrialized countries and improper management this material has created many public health and environmental problems for countries. As a result, these countries take action to illegally exporting hazardous waste to developing countries. These materials were disposed without regard to the principles of environmental and health issues for centuries. To these materials would look as waste that should away from point of production by any means possible and this procedure there is in all industrial countries more or less. Japan was first country considered hazardous waste control in 1960 after Minamata incident many people lost their lives due to eating contaminated fish to methyl mercury discharged into the sea. In Iran despite the long history local organizations and old forms some of municipalities (Over 90 Years) as municipal waste management managers, not done essential and principled activities in this context and also until recent decades transformation in it has not been very tangible and important. Recycling of industrial waste is specific operations on the waste in order to preparation materials and energy. Industrial Ecology is new discipline in the world of science. This thread is focused on the environment, technology and economics and interaction these three categories. Industrial ecology is included the study of material and energy flows social and economic systems considering optimize use them. Industrial ecology is a range with different trends that is considered very young.

Keywords: Industrial Waste, Industrial Ecology, Pollution Reduction

Introduction

Hazardous waste produced in industrialized countries and improper management this material has created many public health and environmental problems for countries. As a result, these countries take action to illegally exporting hazardous waste to developing countries (Mokhtarani 2000). These materials were disposed without regard to the principles of environmental and health issues for centuries. To these materials would look as waste that should away from point of production by any means possible and this procedure there is in all industrial countries more or less (Eshtiaghi 2011). Industrial ecology is a new discipline in

the world of science. Industrial ecology includes study material and energy flows in the social and economic systems considering the optimization of use them. Industrial ecology has become prevalent when that the human was realized to impact of industrial world on the environment. This branch of science became highlighted because created this belief that effect of the industrial world always isn't a negative effect. Hence, in industrial ecology will be efforts industrial world and environment interactions be discovery and operational. (Kordovani 1996)

Industrial Waste

As respects recycling issues and reuse of industrial waste as raw material or energy in the industrial ecology has a particular importance, can be said recycling and reuse of waste on the one hand reduced consumption of raw materials and extraction of natural resources and mining, and on the other reduces indiscriminate disposal of pollutants to the environment. Moreover, will be followed economic resources and health promotion and environmental protection. Recycling is a affordable solution in terms of cost (Mansouri 2012). Recycling of industrial waste could be considered in terms of recycling of valuable materials (Inorganic material Such as metals, glass, plastics and also organic materials such as food waste, compost) and energy recycling (Electricity extracting, gas extracting, water vapor extracting). (Ayers & Lesliew 2002)

History of the Waste Management in the World

Japan was first country considered hazardous waste control in 1960 after Minamata incident many people lost their lives due to eating contaminated fish to methyl mercury discharged into the sea (Lowe 1997). In the United States waste disposal act be enacted in 1965 and in 1970 under public law 91-512 was written a amendment on it. In 1976 Environmental Protection Agency (EPA) was established and this year was created a strong control system for disposal of hazardous wastes. Law of treatment and disposal of hazardous waste by EPA in 1976 was adjusted by Resource Conservation and Recovery Act (RCRA) and carried out in 1980. In Europe in addition to law of 1980, each country to fit their situation and need approve legislation related to waste management or protect their environment. (Keyvani 2003).

History of the Waste Management in Iran

In Iran despite the long history local organizations and old forms some of municipalities (Over 90 Years) as municipal waste management managers, not done essential and principled activities in this context and also until recent decades transformation in it has not been very tangible and important. Waste depot in city level and temporary locations and also illegal recoveries was cause environmental and health pollutions for citizens and their discontent. (Tavana 2011)

According to Article 55 Municipality law adopted 1334 duties of municipality in the field of clean urban environment is cleaning and maintenance of roads, general streams, water channels, wastewater, and also enema of aqueducts related to City. (Zarei & Khal'atbari 2010)

Industrial Ecology

Industrial ecology is included the study of material and energy flows social and economic systems considering optimize use them. Industrial ecology is a range with different trends that is considered very young. In this series be used from Engineering and Technology Sciences, Economics, Sociology, Toxicology and Natural Sciences. (Ayers & Lesliew 2002)

History of Industrial Ecology

Industrial ecology was raised for the first time in 1989 in an American study was written Robert Frach and Nicholas Galapolous. Industrial ecology is looking determine the correct flow use of materials and industrial processes in today's modern society. Industrial Ecology has multi system. First type In this system we have linear path that may entered hurt to environment, because we have only input and output. Second type, in this type system been annular and is done a process. Third type, this system been perfectly circular and not enter any harm to environment, In other words, after the process is available retrieval in the system. (Vigrenon 1990)

Economic Importance of Industrial Ecology Establishment

Proper management waste disposal will have effective role in maintaining national capital. Although, at first glance of establishment industrial ecology created extraction of valuable materials and reusable from waste in mind, but in fact this problem is broader each of which is important and it has important role in fate of society economy. (Omrani 1998)

History of Industrial Ecology in Parks and Industrial Areas of the World -Industrial Parks Friendly with Environmentally

Despite output issue academic and political since the earth summit in 1992, enforcement actions about establishment sustainable development issues in the earth always has faced with evasion stakeholders. An effort to deal with this occurred complicated situation is provide scenario Win - Win – Win towards economic, environmental and social issues that in the literature of sustainable development has special place. Industrial ecology as aspects of sustainable development can be part of the solution. Experts in industrial ecology believe both issues environmental and economic is achievable with upgrades production status from linear mode to a system with closed cycle. (Bourg & Suren 2003)

History of Industrial Ecology in Parks and Industrial Areas of the Iran -Industrial Parks Friendly with Environmentally

Industrial ecology in parks and industrial areas of Iran isn't established and updated topics. Any scientific and academic reference hasn't monitored on this topic. Something that has been importance in recent years is attention to industrial waste management in parks and industrial areas of Iran. From 2006 attention to solid waste management been started in the industrial parks of the country first studies was performed during these years. Studies related to qualitative and quantitative study of solid waste like domestic and industrial in Golestan is considered the first practical experience in waste management in industrial parks of the country. Attention to topics of solid waste studies in parks upward trend gradually, so that, currently, more than 20 settlements and industrial zones have comprehensive studies of solid waste industrial. (Mardan 2007)

Executive Procedures Create Industrial ecology system (Reduction of Pollutant)

The way best and easiest of pollutants reduction per unit is changes in industrial waste included separation of industrial waste, sweeping the warehouse foam, production hall, before washing the foam, employee training. Also changes in production methods are another common method of reduce the amount of pollutants that is expensive usually. (Dadgson 2005)

Recycling and reuse of industrial waste has particular importance. In many industrial units waste recycling has created profitability for industry owners and economic benefit is one of the main motivations for industrial units for pollution reduction operations. In many cases, by performing simple procedures on waste can be use these materials as feed in other industries. Reduction of industrial waste in production source is changes in production processes and this operation is included process optimization, proper maintenance of the product, changes in product mix, changes in inputs, change in technology, or separation of waste streams. (Elgar 2001)

At this stage, using special techniques waste production decreases to a minimum. In order to achieve these goals is need for a accurate program and survey features of all generated wastes in an industrial unit or park. This program is important because the relationship between productions of each waste material is determined with related process. (Georg 1948)

Conclusion

Recycling could be considered as ideal for the human in the industrial waste management. It is an environmentally friendly way that is considered from most important pillars solid waste management. In this way, besides reducing final volume of solid waste obtained income and the bulk of industrial materials returns to manufacturing cycle. In processing solid waste recycling of and separation of valuable compounds from waste and convert it to raw materials is considered purposes of solid waste plans in all countries .

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The way best and easiest of ways to reduce pollutants per unit is changes in process variables such as changes in pressure level, changes in the feed entry, using the newer processes, modern technology, and changes in the equipment. Change in production method is one of the common methods of reduce the amount of pollutants that is expensive usually. Recycling and reuse of industrial waste has particular importance. At this stage, using special techniques waste production decreases to a minimum.

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